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1. A programmable batch processing engine for a computer network,

a design tool subsystem operable on a first computer that creates a set of

wherein the specifications identify processing properties for said

a specification server subsystem adapted to store said template for

a processing subsystem adapted to perform processing of the batch

according to a user defined version of said template; and

a middleware subsystem providing communication of the specifications

2. An engine as in claim 1, wherein the processing subsystem is

3. An engine as in claim 1, wherein the processing subsystem is

4. An engine as in claim 1, further comprising a second computer,

5. An engine as in claim 1, further comprising a network having

6. An engine as in claim 1, further comprising a network having

3 adapted to direct access to the input-output facilities in accordance with the  
4 specifications.

1 7. An engine as in claim 1, wherein said processing subsystem is  
2 implemented using a second computer adapted to send to the first computer completion  
3 data in response to completion of processing in accordance with the specifications by the  
4 second computer.

1 8. An engine as in claim 1, wherein said processing subsystem is  
2 implemented using a second computer adapted to send to the first computer error data in  
3 response to detection of an error in processing according to the specifications by the  
4 second computer.

1 9. An engine as in claim 6, wherein the input-output middleware  
2 subsystem is adapted to selectively route an input-output data stream to one of a plurality  
3 of input-output devices and to convert the data stream to a format suitable for the selected  
4 one of the plurality of input-output devices

1 10. A data processing method, comprising:  
2 generating a set of specifications defining a template for user-desired  
3 processing services to be performed;  
4 identifying processing properties for said processing services to define the  
5 execution of a batch application;  
6 storing said template on a specifications server, said template thereby  
7 being available to a plurality of users;  
8 sending said template to a processing subsystem for processing the batch  
9 application according to a user defined version of said template; and  
10 sending the results of the processing to one of said plurality of users.

1 11. A method as in claim 10, further comprising directing access to  
2 database facilities in accordance with the specifications by using database middleware.

1 12. A method as in claim 10, further comprising directing access to  
2 input-output facilities in accordance with the specification by using input-output  
3 middleware.

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1 13. A method as in claim 10, further comprising sending completion  
2 data from the processing subsystem in response to completion of processing in  
3 accordance with the specifications by the processing subsystem.

1 14. A method as in claim 10, further comprising sending error data  
2 from the processing subsystem in response to detection of an error in processing in  
3 accordance with the specifications by the processing subsystem.

1 15. A method as in claim 12, further comprising selectively routing, by  
2 the input-output middleware, an input-output data stream to one of a plurality of input-  
3 output devices and converting the data stream to a format suitable thereto.

1 16. A programmable batch processing engine for a processing system  
2 including a plurality of computers connected by a network, comprising:

3 design tool means for creating a set of specifications on one of the  
4 computers defining a template for desired processing services, said specifications  
5 identifying processing properties for said processing services to define the execution of a  
6 batch application;

7 specification means for storing said template on another one of the  
8 computers to provide the plurality of computers with access to said template;

9 processing means responsive to said template for processing said  
10 batch application in accordance with a user defined version of said template on a further  
11 one of the computers; and

12 middleware means for communicating information including said  
13 set of specifications between the plurality of computers.

1 17. An engine according to claim 16, further including database means  
2 for storing data required by said processing means when executing said batch application  
3 on an additional one of the computers.

1 18. An engine according to claim 16, further including output means  
2 responsive to completion data generated by said processing of said batch application for  
3 managing output information on an additional one of the computers.

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1                   19.    A method for a processing a batch application on a processing  
2   system including a plurality of computers connected by a network, comprising:  
3                    creating a set of specifications on one of the computers defining a  
4   template for desired processing services;  
5                    identifying processing properties for said processing services to  
6   define the execution of a batch application;  
7                    storing said template on another one of the computers to provide  
8   the plurality of computers with access to said template;  
9                    processing said batch application in accordance with a user defined  
10   version of said template on a further one of the computers; and  
11                   communicating information including said set of specifications  
12   between the plurality of computers.

1                   20.    A method according to claim 19, further including storing data  
2   required by said processing means when processing said batch application on an  
3   additional one of the computers.

1                   21.    A method according to claim 19, further including managing  
2   output information on an additional one of the computers in response to completion data  
3   generated by said processing of said batch application.